

CLADONIA PIEDMONTENSIS f. LEPIDIFERA (Vainio) Robbins (p. 491). Essex (1931), Granby (*Musch & Evans*, 1930), Madison (1931), North Branford (1931), and Old Saybrook (1931).

*CLADONIA PIEDMONTENSIS f. SQUAMOSISSIMA Robbins, *Rhodora* **31**: 104. *pl.* 187, *f.* 13. 1929.

Among mosses in an old field, Old Saybrook (1931).

The podetia of this form are densely squamulose, with sterile or sparsely fruited tips.

Collections of Cladoniae have now been made in 99 of the Connecticut towns, leaving a residue of 70 towns still to be heard from. At the close of 1928 collections had been made in 95 towns, so that only 4 new towns have been added to the list. Most of the progress made during the past three years is, in consequence, based on the more intensive exploration of certain towns from which Cladoniae had already been recorded.

In the 1930 report (p. 498) 18 towns were listed in each of which 16 or more species had been collected; this number is now increased to 23. The town standing at the head of the list was North Canaan, with 27 species to its credit; this position is now occupied by the town of North Branford, with 35 species. The other towns, with over 20 species each to their credit, are the following: Madison, 33 species; Old Saybrook, 32; North Canaan and North Haven, 27 each; Branford, 26; East Hampton 25; Bethany and Stamford, 23 each; Beacon Falls, Essex, and Wallingford, 22 each; and Lyme, 21.

YALE UNIVERSITY.

BARTONIA; A COMEDY OF ERRORS

M. L. FERNALD and C. A. WEATHERBY

THE little gentianaceous genus *Bartonia* was clearly and very fully described by Muhlenberg¹ in 1801, with a single species, *B. tenella* Willd. In 1803, Michaux² independently described the genus as *Centaurella* with two species, *C. verna* and *C. paniculata*, both clearly illustrated. It was subsequently shown that *B. tenella* Willd.³ (1801)

¹ Muhl. in Willd. Ges. Naturf. Freunde Berlin, Neue Schrift. iii. 444 (1801).

² Michx. Fl. Bor.-Am. i. 97, 98, t. 12, figs. 1 and 2 (1803).

³ The binomial *B. tenella* is often ascribed to Muhlenberg but, when he described it Willdenow, who credited the generic name to Muhlenberg, said nothing of Muhlenberg's having given the specific name as well. Willdenow said in introducing the specific diagnosis: "Es ist mir nur eine Art bekannt nemlich: *BARTONIA tenella*." It would seem that Willdenow should stand as author of the binomial.

was *Sagina virginica* L. Sp. Pl. 128 (1753) and the resulting combination *B. virginica* (L.) BSP. Prel. Cat. N. Y. 36 (1888) replaced *B. tenella*. Besides *B. virginica* two other species occur in the eastern United States: *B. verna* and *B. paniculata*. In the first volume of *Index Kewensis* the former, by some inexplicable interpretation, appears as *B. "verna, Muhl. ex A. Gray, in Chapm. Fl. S. U. St. 357"*; while *B. paniculata* is not cited at all. Search in Chapman's first edition (1860) fails to reveal any connection of Gray with the work, except in a general advisory capacity acknowledged in the Preface; and *B. verna*, correctly ascribed to Muhlenberg, had been in Gray's Manual, ed. 2: 347 (1857).

In 1903, Small pointed out that two quite distinct species were confused under the name *Bartonia virginica* and he separated upon characters which have proved very constant, *B. lanceolata* Small, Fl. Se. U. S. 932 (1903). Subsequently, finding that *Centaurella paniculata* Michx. (1803) is Small's plant, Robinson renamed it *B. paniculata* (Michx.) Robinson, RHODORA, x. 35 (1908). As already stated, the name *B. paniculata* is not found in the first volume of *Index Kewensis*, consequently the faith in that work, usually so thoroughly justified, has led to the perpetuation of the combination *B. paniculata* (Michx.) Robinson. Singularly enough, however, Muhlenberg made the proper combination on the same page with *B. verna* (Michx.) Muhl. Ordinarily the names in Muhlenberg's *Catalogus* are ignored as *nomina nuda* or *nomina subnuda*, but in the case of *Bartonia* there is no question as to what was meant. *Bartonia* had already been published by Muhlenberg with full description; and in his *Catalogus* (1813), p. 16, Muhlenberg gave it the generic synonym *Centaurella* Michx. and cited two species, *verna* and *paniculata*. These, of course, were *Centaurella verna* and *paniculata* of Michaux, properly transferred by Muhlenberg. Consequently, the binomials and their proper citations are

BARTONIA VERNA (Michx.) Muhl. Cat. 16 (1813). *Centaurella verna* Michx. Fl. Bor.-Am. i. 98, t. 12, fig. 2 (1803).

B. PANICULATA (Michx.) Muhl. l. c. (1813). *Centaurella paniculata* Michx. l. c. fig. 1 (1803).

The gentianaceous genus *Bartonia* Muhl. (1801), dedicated to Benjamin Smith Barton, ran into opposition. As already noted, Linnaeus had included it under *Sagina*! Michaux, apparently unfamiliar with Muhlenberg's publication, had independently published the genus as *Centaurella* (1803); and Persoon, Syn. i. 137 (1805) renamed it *Centaurium* (not *Centaurium* Hill). In 1812, Sims, however, described an

entirely different *Bartonia* (now merged with *Mentzelia*) and Nuttall (1817) took this up and retained *Centaurella* for *Bartonia* Muhl. Such treatment justly roused the ire of Rafinesque and of Amos Eaton.

In 1818 Rafinesque,⁴ in his criticism of Pursh's Flora, discussing no. 20 of "some of the most glaring errors adopted or introduced therein," said: "He adopts the erroneous generic name of *Centaurella*, Mx. instead of *Bartonia*, Wil[l]d. while *Bartonia* is an anterior name. . . . while Messrs. Pursh, Nuttall and Sims have given the name *Bartonia* to another new genus. The best means of correcting those blunders, is to leave the name of *Bartonia* to the genus to which it was first applied, annulling altogether the erroneous names of *Centaurella* and *Centaurium*, and giving to the new *Bartonia* the name of *Nuttalloe* [evidently a compositor's rendering of *Nuttallia*]."⁵

In 1822, discussing *Bartonia paniculata* (Michx.) Muhl., "Screw-stem," Eaton said "It is thought best to retain this name, until the fancies of our *verbifacient* botanists shall become so nearly stationary, that one or two changes more may settle upon this little plant a permanent name."⁶ In 1829 Eaton went a step further and renamed *Bartonia* "Nuttall" (i. e. Sims) *Torreya*,⁷ the fourth use of this ill-fated name. In 1833 Eaton was still adamant: "I follow Muhlenberg still in the name of this elegant little plant; because it is his discovery and his name. No convention among botanists is of sufficient authority to change an established name. This plant is common where Barton and Muhlenberg earned their reputation, and it is not to the advantage of either, to drive this plant to the genus *Sagina*, *Centaurella*, or *Torreya*. Mr. Nuttall consented to my applying *Torreya* to his *Bartonia*, *ornata* and *nuda*, which privilege I asked at his botanical garden in Cambridge, in May, 1820, on account of the *Bartonia paniculata* being immoveably established. I shall make no changes at present."⁸ But, in spite of his brave fight through many years, Eaton weakened in his old age and in his seventh edition (1836)

⁴ Raf. Am. Mo. Mag. ii. 175 (Jan. 1818).

⁵ Further to complicate matters, *Nuttallia* Raf. (1818), a substitute name for *Bartonia* Sims (not Muhl.) of the *Loasaceae*, appears in *Index Kewensis* (as *Nuttalla*) and in Dalla Torre & Harms in the generic synonymy of *Bartonia* Muhl. of the *Gentianaceae*! Incidentally, *B. pubescens* Raf., appearing in *Index Kewensis* as probably equivalent to the gentianaceous *B. verna*, is a *Mentzelia*.

⁶ Eaton, Man. Bot. ed. 3: 202 (1822).

⁷ Eaton, Man. Bot. ed. 5: 420 (1829). The genus *Torreya* Eaton has not been entered in *Index Kewensis* nor Pfeiffer's *Nomenclator*; and its original place of publication is erroneously stated in Wats. Bibl. Index i. 391 and, following him, by Dalla Torre & Harms.

⁸ Eaton, Man. Bot. ed. 6: 51 (1833).

abandoned *Bartonia* Muhl. in favor of *Centaurella* and took up *Bartonia* Sims.

As if the gentianaceous genus had not names enough already, Sprengel, Syst. i. 368 and 428 (1825), substituted for *Bartonia* Muhl. and *Centaurella* Michx. the new name *Andrewsia*, the fourth name for the genus and the second use of *Andrewsia*.

The status of the generic names here discussed is briefly summarized as follows:

BARTONIA Muhl. in Willd. Ges. Naturf. Freunde Berlin, Neue Schrift. iii. 444 (1801). *Centaurella* Michx. Fl. Bor.-Am. i. 97, 98, t. 12, figs. 1 and 2 (1803). *Centaureium* Pers. Syn. i. 137 (1805), not Hill (1756). *Andrewsia* Spreng. Syst. i. 368 and 428 (1825), not *Andreusia* Vent. (1804). GENTIANACEAE.

BARTONIA Sims, Bot. Mag. xxxvi. t. 1487 (1812); Pursh, Fl. Am. Sept. i. 327 (1814); Nutt. Gen. i. 297 (1817); not Muhl. (1801). *Nuttallia* (misprinted *Nuttallæ*) Raf. Am. Mo. Mag. ii. 175 (Jan., 1818)). *Torreya*⁹ Eaton, Man. Bot. ed. 5: 420 (1829), not Raf. (1818), nor Raf. (1819), nor Spreng. (1821). Generally merged with *Mentzelia* L. of the LOASACEAE.

NOTES ON THE FLORA OF BOOTHBAY, MAINE—III.—POGONIA OPHIOGLOSSOIDES (L.) Ker, f. ALBIFLORA Rand & Redfield. In *Sphagnum*, Ocean Point.

RUBUS IDAEUS L., var. HETEROLASIUS Fernald, RHODORA xxi. 97 (1919). This seems to be the common raspberry just above the line of bare rock along the coast in the Boothbay region. I have collected it on an exposed bank near the sea-margin, Ocean Point, on a wind-swept hilltop on Fisherman Island, in a thicket near the sea at Cape Newagen, Southport, and on sea-cliffs at Small Point in Sagadahoc County. Also in rather open dry ground, half a mile from the sea, at

⁹ The name *TORREYA* Arn. (1838) for an important taxaceous genus of great paleontological interest is upset by the recent adoption of the *homonym* rule. If *Torreya* Arn. is to be retained against *Torreya* Raf. (1818), *Torreya* Raf. (1819), *Torreya* Spreng. (1821) and *Torreya* Eaton (1829), it will be necessary to conserve it. For *Torreya* Arn. many authors have taken up *Tumion* Raf. Amen. Nat. 63 (1840), which was a direct renaming of Arnott's *Torreya*. Other substitutes for different genera called *Torreya* which have failed of admission to standard bibliographies, are: for *Torreya* Barton (*Malvaceae*) *Aigosplen* Raf. Amen. Nat. 62 (1840), Rafinesque, obviously meaning this as a substitute for *Torreya* Barton, although he said "of Eaton"; for *Torreya* Spreng. (referred to *Clerodendron*) *Patulix* Raf. l. c. (1840).

The name *Nuttallia* Torr. & Gray (1840), often maintained for a rosaceous genus, is antedated by *Nuttallia* Raf. (1818), *Nuttallia* DC. (1821), *Nuttallia* Spreng. (1821), and *Nuttallia* Barton (1822). *Nuttallia* Torr. & Gray has become *Osmaronia* Greene (1891).